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Anti-petasin Antibodies, Methods for Making
and Therapeutic Process

This is a continuation of international application No. PCT/DE99/03525,
filed on November 1, 1999.

5 Field of invention

The invention relates to anti-petasin antibodies for detecting
petasin or petasin protein conjugates in physiological liquids which do not
show any cross reactivity to derivatives, structural analogs or metabolics of
petasin, methods for producing them by immunization by petasin derivatives
10 which are suitably coupled to a carrier molecule, and to their use and a test kit.

Background

Petasin, a component of butterbur extracts is a known ester of
petasol and angelic acid which already for a longer time has been used as
vegetable spasmolytic for combatting spasms of the gastrointestinal tract,
in particular ureteral colics, spastic bronchitis and migraine and also as an
antiphlogistic (B. Debrunner et al.; Pharm. Acta Helv. 72, 359-380 (1998). In
addition, an antitumor effect is attributed to petasin drugs (B. Meier et al.,
20 Hagers Handbuch der pharmazeutischen Praxis (Manual of pharmaceutical
practice), 5th edition, p. 81-105, Springer-Verlag (1994)). Also the latest
findings relating to the effects on the biosynthesis of leukotrienes are available
(D. Pichl et al., Planta Medica, 60, 318-322 (1994)).

25 After oral application of petasin drugs only concentrations in the
range of a few ng/ml are to be expected in body fluids of healthy subjects. Due
to this background biological, physical and chemical methods of detection
applied in characterizing the drug itself cannot be used for quantifying petasin
in body fluids. Even most up-to-date analytical methods such as the HPLC
30 usually applied are not sufficiently sensitive or not suitable due to their large
time requirement for large numbers of samples.